REVIEWS OF BOOKS.

SPECIELLE MUSKELPHYSIOLOGIE ODER BEWEGUNGSLEHRE. By DR. R. DU BOIS-REYMOND, Privat-docent in Berlin. Mit 52 Abbildungen. Berlin: August Hirschwald, 1903.

The first systematic consideration accorded the functions of muscles dates back nearly a century, when Sir Charles Bell edited his "Anatomy and Philosophy of Expression." Somewhat more than sixty years later, 1867, Duchenne (de Boulogne), in his "Physiologie des Mouvements," was the first to apply the scientific methods of the laboratory, electricity, and chemical observations for the better understanding of muscle physiology. Since Duchenne's classical contribution there has been a very large output of articles bearing on muscle functions and analysis of joint motions, but no comprehensive work has been written since that date. A feature, therefore, of Reymond's monograph, appearing nearly fifty years after. Duchenne's consists in having coralled the fragments of literature. It differs as markedly from Duchenne's work as the latter differed from Bell's classic, for this "Muskelphysiologie oder Bewegungslehre" is alive with mechanics, dynamics, geometry, and mathematics applied to anatomy *in vivo et in cadavere.*

The subject-matter is considered under six headings. In the first part there are discussed the methods of investigating joint forms and joint motions by geometrical projections, frozen sections, casts, and models constructed on these; by instantaneous photography (Marey) and Röntgengrams. Still another chapter is devoted to general considerations of the muscles, the degree of their activity, the division of labor among the individual muscles. The second part covers the external and internal architecture of bones along the lines laid down by the mathematician

Cullman, and latterly built up by Meyer, Lesshoft, and Wolff. There follows in the third division, embracing the largest part of the book, a chapter on the general principles of joint mechanics applied to the classification of the varieties of joints, and a second chapter on the mechanism of each special joint in the body. In the succeeding fourth division the first chapter deals with the generalities of muscle dynamics, muscle forms, and the range of their activities. A chapter is devoted to the relation of innervation to muscle mechanics, comprising a study of associated, coördinated, concomitant, and synergistic actions. Chapter two covers the mechanics of special muscles and the movements of the trunk, the extremities, and the articulations by the muscles. The concluding fifth division takes in an analysis of the acts of standing and walking.

Reymond's book is dedicated to the genius of Otto Fischer, whose exhaustive researches in applied mechanics to joint actions and muscle functions made possible this work in a great measure. The modest share the author would reserve for himself is that of having built up a system on the heretofore scattered prolific contributions of Fischer, and by a compilation of all the newer literature to have supplemented the accepted teachings of Duchenne. Only one masterfully conversant as the author, himself a diligent writer in this abstract field, could have succeeded in reducing these abstruse calculations and speculations within the limits of the concrete so as to render them of possible service to the art of medicine and surgery. For the further development of tendon transplantations, and perhaps nerve grafting, it may be necessary to lean strongly upon these teachings.

Heretofore, mechanics in orthopædics was limited to appliances, but with arthro-kinematics (Fischer), osteo-dynamics (Cullman, Meyer, Wolff), and muscle mechanics of Duchenne, all masterly rendered by Reymond, a scientific foundation hitherto wanting has been found for orthopædy. It now remains for the teachers of orthopædy, neurology, and physiology to still

further popularize these teachings by indulging themselves in a studious perusal, which the complex problems discussed in this book calls for.

MARTIN W. WARE.

PRACTICAL OBSTETRICS. A Text-Book for Practitioners and Students. By EDWARD REYNOLDS, M.D., Assistant in Obstetrics, etc., and FRANKLIN S. NEWELL, M.D., Assistant in Obstetrics, Harvard University. 8vo, pp. 531. Philadelphia and New York: Lea Brothers & Co., 1902.

The first two divisions of this book follow closely the stereotyped plan of describing the anatomy of the female genitalia and their physiologic functions, and the hygiene and management of normal pregnancy and labor. The classification of presentations adopted by the authors may have some good reason as its justification, but O. D. A. and the like are very confusing to those who are in the habit of speaking of this position as "left occipito-anterior."

Especial stress is properly laid upon asepsis, for "the dirty finger-nail of the obstetrician still furnishes the gynæcologist with a large part of his material, and the chronic ill health of many women is due to the wilful neglect or carelessness of the physician who attended them in their confinement."

It is doubtful whether most American physicians prefer to examine their patients in the left lateral decubitus, and few would agree that this is the favorite position for delivery in the United States. Indeed, throughout the book many similar positive statements are made which may be true in Boston, but which certainly do not hold good in other parts of the country. The description of labor in the lateral position is so unusual in text-books that it is of value, though the illustrations borrowed from many different authorities fail to support the lateral hypothesis.

Obstetrical surgery, including manual dilatation, forceps, version, the destructive operations upon the child, and the major

operations upon the mother are especially well described, and the indications and contraindications of each operation clearly given. Deformed pelves, intrapelvic tumors, the hæmorrhages, placenta prævia, eclampsia, and the accidents of labor also summarize important chapters.

The division of the volume devoted to the puerperium is in many ways the best in the book, and the details of management of both mother and child will stand the test of trial.

As is usually the case where an author attempts to cover so wide a field in a single volume, many things are omitted which will seem important to the average reader. Thus Barnes's bags are mentioned, but the far more valuable contrivance of Champetier de Ribes is not mentioned; the details of the poor man's bath are excellently described, but the method of hypodermoclysis does not appear; forceps of little save an historic interest are depicted, but the solid blade forceps of Tucker-McLane is left out. Original illustrations are few if any, but the choice made from the works of other authors is an excellent one. All in all, the defects are few, and there are so many things to praise that the balance is large on the credit side of the account.

HENRY P. DE FOREST.

A TEXT-BOOK OF OBSTETRICS. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania. Third Edition. 8vo, pp. 872. Philadelphia and London: W. B. Saunders & Co., 1903.

This volume is an excellent example of the type of text-book written by a single individual, and comprehensively covering the entire subject. Many indeed regard it as *facile princeps* among the works of this class; for advanced students and for the general practitioner it may well be regarded as the best volume upon obstetrics yet produced by a single author.

Pregnancy, Labor, the Puerperium, and the New-Born Infant are the principal divisional headings, but the author's method of

arrangement differs somewhat from that usually adopted. Anatomy and physiology are given ample recognition where these subjects must of necessity be considered, but pathology is really the key-note of the volume. Anomalies of development and pathologic changes both gross and microscopic are described with an attention to detail, with such wealth of illustrative material and clinical experience, and with the logical sequence of cause, symptoms, and treatment so well preserved throughout, that the discussion of each group of cases is of unusual interest.

Years of successful practice and a free use of the material thus accumulated are large factors in the success of the book. The numerous illustrations are, as a rule, singularly good, but the few colored plates are so crudely tinted that they compare unfavorably with the others made from drawings or from photographs. Unfortunately, too, although the index to the subject-matter is an ample one, there is no list of the illustrations, so they cannot readily be referred to in looking up the literature of a given topic.

HENRY P. DE FOREST.

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